

Keeping **cool** with case printing



Soft-sided, insulated lunchbox and cooler manufacturer Outer Circle gives preprinted cases the cold shoulder, installing a digital case printer.

Anne Marie Mohan, Senior Editor

The recognized leader in insulated lunchboxes and, by most measures, in the soft-sided cooler market, Chicago-based Outer Circle Products, Ltd. has made its name by keeping things cool under heated conditions. But, when unmanageable raw-material inventory procedures caused temperatures to rise at its Cicero, IL, assembly and packaging plant, the company had to look to outside suppliers to put out the fires.

Offering a line of approximately 60 products, comprised of nearly 300 active stockkeeping units, Outer Circle markets a full range of insulated storage containers—including everything from lunch bags and boxes to bottles, jugs and gallon containers, as well as children's toy chests and other miscellaneous items—under the Arctic Zone brand name. Licensed products for private-label use are also manufactured and packaged by the company.

The company's Cicero plant services major retail stores, including Kmart, Wal-Mart, Target and others. In the spring and summer months preceding the back-to-school season, when insulated lunchbox buying is at its peak, the 450,000-sq-ft plant may be staffed with up to 500 employees

working two shifts. During off-season months, staff requirements taper down to 54 full-time employees over one shift. Either way, with so many skus being readied for so many customers, speed and efficiency are critical.

Today, after its acquisition of a digital case printer from Iconotech to replace the use of preprinted shipping cases, Outer Circle is meeting those requirements better than ever.

Preprinted cases lack flexibility

Despite its prodigious output, Outer Circle's Cicero facility boasts relatively few bells and whistles, beyond its state-of-the-art printing and stretch-wrapping capabilities. Most other operations are manual.

Finished soft goods, manufactured in China, arrive at the facility by the truckload. The insulated items, which are shipped flat to maximize space during transport, then proceed through the facility's assembly operation, where packaging or marketing materials, such as tags or promotions, are added. The shelf-ready products are then packed in shipping cases, which are manually stacked on pallets.

In the past, Outer Circle relied on preprinted cases to convey pertinent identifying information. But what they



found was that not only was this a cost-prohibitive method due to the expenses incurred with offset printing, but it also wreaked havoc with the company's raw-material inventory accuracy. "It forced us into buying a lot more different case skus," says Dale Bailey, in charge of warehousing and logistics, operations, for Outer Circle. "For example, we might use the same size case for several different products, having different item numbers. Therefore, they each would require their own preprinted case, so our inventory of boxes was really out of control. We had too many cases.

"With too many cases, it's harder to maintain your inventory accuracy and to keep track of your demand versus your supply," he continues.

In some instances, when a product would change from a promotional to a non-promotional item, or vice versa, and would require a new item number, operators would use an Intermec printer to create p-s labels that would be placed over the old information. Explains Jason Jellovitz, responsible for Outer Circle's production, this loss of flexibility was another pitfall of using preprinted cases. "Even though we were



using preprinted cartons, we'd have to label over the preprinted information anyway," he says. "You're not going to throw the carton away, because it's the same size carton, same product, but now the item has changed." This method also compromised the appearance of the cases, Jellovitz adds.

Inventory, quality issues eased

In late '99, after a particularly difficult year battling inventory-accuracy issues, Outer Circle's management sought a solution that could reduce case skus, while maintaining critical numerical information on the shippers. They chose the DCP-3200 digital case printer from Iconotech, which would allow them to print the cases in-house as needed.

With the DCP-3200, say Bailey and Jellovitz, Outer Circle can now print cases comparable in quality to preprinted stock, but at a greater cost savings. The single-color printer, which provides an 11x23-in. print area, can produce 60 cases/min at 200 dpi. Notes Bailey, "It's really hard to distinguish the cases from those that are preprinted. The bar codes are completely scannable."

A pruned inventory of case sizes

The digital case printer's magazine, left, accommodates case blanks up to 36 x 39 in., in stacks up to 39 in. high. After being printed, cases exit onto a restacker, right, and are then fed onto a conveyor.

now comprises 21 skus, ranging in size from 0.4 cu ft to 3.6 cu ft. Information added to the RSCs includes any graphics or logos; item numbers, which, Bailey says, "drive the company's whole internal production and shipping processes"; and bar-code information printed per the customers' specifications. Cases are printed in one pass on two adjacent panels; four-panel printing, which is not required by Outer Circle, involves two passes through the machine.

Recouping its investment in the DCP in one year, Outer Circle is now saving up to \$100,000/year through "cost-avoidance," says Bailey. "We've been able to reduce our headcount slightly. But the biggest cost savings have come from not having to pay for platemaking, a reduced inventory and the purchasing power gained through bulk buying of plain cases," he says.

With the DCP-3200, plates, or "stencils," are output directly from a Windows-based computer to a thermal imager. Loaded on the DCP in a matter of 1½ min, the plates can be used for up to 5,000 impressions. And, as the registration is set during the image-creation process, no machine adjustment is required.

Printing stock on-demand also ensures that cases do not become obsolete. "We have a 99.96 percent inventory accuracy with our raw materials," says Bailey. "I can tell you that our accuracy prior to having the digital case printer was significantly lower. While there were some other issues that we had to address to become better organized, the printer clearly helped us with our case inventory."

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